

Remarks

By this amendment, claims 2, 7, 14 and 17 have been cancelled. **Claims remaining in consideration are claims 1, 3-6, 8-13, 15 and 16.** Claims 1, 6, and 11 are the independent claims.

Drawings

The Examiner has objected to the drawings because numeral 25 for a bell crank in Figs. 1-3 is pointing to a pivot point. Attached for the Examiner's approval are amended drawings with a moved lead line, shown in red ink, for reference numeral 25. Substitute drawings will be submitted to the Official Draftsperson upon the Examiner's approval of the proposed changes.

Further, the Examiner has objected to the drawings for failure to illustrate "a plurality of rotating compression rollers" in line 2 of claims 2, 7 and 12. The applicant has chosen to cancel claims 2 and 7 and to amend claim 12.

Claim Rejection – 35 USC §103

Claims 1-17 are rejected under 35 USC 103(a) as being unpatentable over United States Patent No. 4,770,093 to Gunther et al. (hereinafter "Gunther") in view of United States Patent No. 4,557,189 to Schaible (hereinafter "Schaible").

Applicant has amended the specification to provide support in the claims. Further, applicant has amended claims 1 and 6 to recite "resilient means for increasing a latching force on the latching mechanism as a bale in the baling chamber increases in size." Applicant has also amended claim 11 to recite "interconnecting a latch with a second arm of the bell crank; engaging a pawl with the latch to lock the two-part housing; and increasing the force on the pawl as the size of the bale increases." No new matter has been added by these amendments.

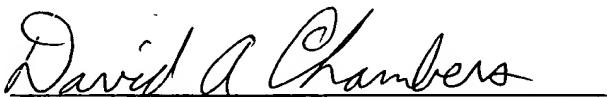
Neither Gunther nor Schaible disclose the use of resilient means for increasing a latch force as a bale increases in size. For a *prima facie* case of obviousness, the prior art references must teach or suggest all of the claim limitations. See MPEP 2142. Thus, claims 1 and 6 must be viewed as patentable as amended. Moreover,

because claims 3-5 are dependent upon claim 1 and include all of the limitations thereof, claims 3-5 must be viewed as patentable. Similarly, claims 8-10 depend from and include all of the limitations of claim 6 such that claims 8-10 must be viewed as patentable.

Further, neither Gunther nor Schaible disclose increasing the force on the pawl as the size of the bale increases. For a *prima facie* case of obviousness, the prior art references must teach or suggest all of the claim limitations. See MPEP 2142. Thus, claim 11 must be viewed as patentable as amended. Moreover, because claims 12, 13, 15 and 16 are dependent upon and include all of the limitations of claim 11, claims 12, 13, 15 and 16 must also be viewed as patentable.

In view of the above, it is submitted that this application is now in condition for allowance, and an early notice of allowance is solicited.

Respectfully submitted,


David A. Chambers
David A. Chambers, Reg. No. 50,788
Husch & Eppenberger, LLC
401 Main Street, Suite 1400
Peoria, Illinois 61602
(309) 637-4900

Version With Markings to Show Changes Made

Following is a marked-up version of the application with all changes shown by conventional comparison (underlining and bracketing):

In the Specification

Following is a marked-up version of the paragraph that begins on page 4, line 4, and ends on page 5, line 7:

Referring now to Fig. 2, the tensioning arms 18 pivot upwardly about the axis 17 in accordance with the increasing diameter of the round bale 16, thereby matching the guiding arrangement for the belts 11 to the actual circumference of the round bale 16. Pivotal arms 19 are connected to the tensioning arms 18 to rotate therewith. A tension spring 21 for pulling the tensioning arm 18 into its lower end position at the beginning of the baling action is arranged between the pivotal arm 19 and a fixed mounting point 20 on the baler frame 9. The belts 11 are thereby placed in the requisite starting position for the baling process. A hydraulic cylinder 22 is mounted in a pivotal manner on the free end of the pivotal arm 19. The piston rod 23 of the hydraulic cylinder 22 is connected to an arm 24 of a double-armed bell crank 25. The bell crank 25 is pivotally mounted on a bearing 26 located on the sidewall of the tailgate 10. The other arm 27 of the bell crank 25 is connected to a latch or pawl 28, which is pivotal about an axis 29 in the lower region of the tailgate 10. The pawl 28 engages a fixed spigot or keeper 30, located on the frontal housing part 8. The tailgate 10 is thereby firmly locked to the frontal housing part 8 during the baling process. The force effective on the pawl 28 increases proportionately with the upward pivoting of the tensioning arm 18 as the diameter of the round bale 16 increases during the course of the baling action. Thus, the greatest locking force will occur at the heaviest load levels, thereby ensuring that the tailgate 10 will always be positively locked to the frontal housing part under any circumstances. Once the final size for the round bale 16 has been attained, pressure is applied to the hydraulic cylinder 22 so as to

drive out the piston rod 23 and pivot the bell crank 25 towards a fixed stop 31 located below the arm 24 of the bell crank 25, as shown in Fig. 3. As a result, the pawl 28 is drawn upwardly, thereby releasing the locking mechanism to provide selective engagement. The tail gate 10 is thereupon pivoted upwardly about the pivotal axis 32 by the effective torque provided by the hydraulic cylinder 22 so as to release the round bale 16 which is then deposited on the ground 5. Once the bale has been expelled, pressure is again applied to the hydraulic cylinder 22 to pull the piston rod 23, thereby pivoting the tail gate 10 downwardly and causing the belts 11 to return to their starting position so that a new baling process can begin. The controlling of each of the functional elements is effected exclusively by means of the hydraulic cylinder 22. The directions of rotation or movement of the rollers and belts 11 are indicated in the drawing by means of the arrows P.

In the Claims

1. (Amended) In a round baler for bailing harvested crops and having a baling chamber surrounded by a two-part housing of which a front part is rigidly connected to a frame of the baler while a rear part is in the form of a pivotal tailgate, the improvement comprising an actuating mechanism having a plurality of belts and rollers disposed adjacent [to] one another within the baling chamber for enabling baling chamber size to vary when pivoted, and a tensioning arm provided with guide rollers and a pivotal arm, wherein the tensioning arm is pivotally mounted on the frame of the baler via a hydraulic cylinder arranged between the pivotal arm and a first arm of a bell crank, wherein the first end of a bell crank is pivotally mounted on a side wall of the baler's tailgate, and wherein a second arm of the bell crank is operatively engageable with a latching mechanism on a frontal part of the housing and resilient means for increasing a latching force on the latching mechanism as a bale in the baling chamber increases in size.

3. (Amended) A round baler according to Claim 1, wherein the actuating mechanism [has] includes a plurality of mutually interlinked belts.

4. (Amended) A round baler according to Claim 1, wherein a fixed stop is arranged on the tailgate below the second arm of the bell crank.

5. (Amended) A round baler according to Claim 1, wherein the means for increasing a latching force on the latching mechanism includes a tension spring [is] arranged between the pivotal arm and a fixed mounting point on the frame of the baler.

6. (Amended) In a round baler for bailing harvested crops and having a baling chamber surrounded by a two-part housing of which a front part is rigidly connected to a frame of the baler while a rear part is in the form of a pivotal tailgate, the improvement comprising an actuating mechanism having a plurality of circulating flat-type belts and pressure rollers disposed adjacent [to] one another within a peripheral region of the baling chamber for enabling baling chamber size to vary when pivoted, and a tensioning arm provided with guide rollers and a pivotal arm, wherein the tensioning arm is pivotally mounted on the frame of the baler via a hydraulic cylinder arranged between the pivotal arm and a first arm of a bell crank, wherein the first end of the bell crank is pivotally mounted on a side wall of the baler's tailgate, and wherein a second arm of the bell crank is connected to a [pivotal pawl,] latch which is engageable with a [stationary spigot] keeper disposed on the frontal part of the housing and resilient means for increasing a latching force on the keeper as a bale in the baling chamber increases in size.

8. (Amended) A round baler according to Claim 6, wherein the actuating mechanism [has] includes a plurality of mutually interlinked belts.

9. (Amended) A round baler according to Claim 6, wherein a fixed stop is arranged on the tailgate below the second arm of the bell crank.

10. (Amended) A round baler according to Claim 6, wherein the means for increasing a latching force on the latching mechanism includes a tension spring [is] arranged between the pivotal arm and a fixed mounting point on the frame of the baler.

11. (Amended) A method for bailing harvested crops utilizing a round baler having a baling chamber surrounded by a two-part housing of which a front part is rigidly connected to a frame of the baler while a rear part is in the form of a pivotal tailgate, the method comprising:

pivoting an actuating mechanism having a plurality of belts and rollers disposed adjacent to one another within the baling chamber to vary baling chamber size;

pivottally mounting a tensioning arm, having guide rollers and a pivotal arm, on the frame of the baler via a hydraulic cylinder arranged between the pivotal arm and a first arm of a bell crank;

[pivottally mounting the first arm of a bell crank on a side wall of the baler's tailgate; and

selectively engaging a second arm of the bell crank with a frontal part of the housing]

interconnecting a latch with a second arm of the bell crank;
engaging a pawl with the latch to lock the two-part housing; and
increasing the force on the pawl as the size of the bale increases.

12. (Amended) The method according to Claim 11, [wherein the actuating mechanism has a plurality of rotating compression rollers] including the steps of:

pivottally mounting the first arm of a bell crank on a side wall of the baler's tailgate; and

selectively engaging a second arm of the bell crank with a frontal part of the housing.

13. (Amended) The method according to Claim 11, [wherein the actuating mechanism has] including providing a plurality of mutually interlinked belts to form part of the actuating mechanism.

15. (Amended) The method according to Claim 11, [wherein a fixed stop is arranged] including arranging a fixed stop below the second arm of the bell crank.

16. (Amended) The method according to Claim 11, [wherein a tension spring is arranged] including arranging a tension spring between the pivotal arm and a fixed mounting point on the frame of the baler for increasing the force on the pawl as the size of the bale increases.